

Appl. No. 10/063,868

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (original): An electric drive assembly comprising a torque generator; an inverter assembly which is coupled to said torque generator; a current regulator which is coupled to said inverter assembly; and a controller which is coupled to said current regulator, said controller receiving a torque request signal and, in response to said received torque request signal, said controller selects a certain value and generates a signal to said inverter assembly which is effective to cause said inverter assembly to produce a voltage signal having a certain amplitude attribute and a certain phase angle attribute, said controller further compares at least one of said attributes of said voltage signal with said selected certain value and, based upon said comparison, generates a signal indicative of undesired torque generation.

Claim 2 (original): The method electric drive assembly of Claim 1 wherein said certain value comprises a voltage value.

Claim 3 (original): The electric drive assembly of Claim 1 wherein said certain value comprises a phase angle value.

Claim 4 (currently amended): The electric drive assembly of Claim 1 wherein said electric drive assembly comprises a positive feedback assembly which is coupled to said controller and which is selectively activated by said signal indicative of undesired torque generation which is generated by said controller.

Appl. No. 10/063,868

Claim 5 (currently amended): The electric drive assembly of Claim 4 wherein said signal indicative of undesired torque generation is generated by said controller only when the difference between said at least one attribute of said voltage signal and said selected certain value is greater than a predetermined value.

Claim 6 (original): The electric drive assembly of Claim 5 wherein said predetermined value is about ten percent of said selected certain value.

Claim 7 (currently amended) The electric drive assembly of Claim 1 wherein said positive feedback assembly comprises an audio assembly generator.

Claim 8 (currently amended) The electric drive assembly of Claim 1 wherein said positive feedback assembly comprises a visual light assembly generator.

Claim 9 (currently amended) An electric drive assembly comprising a torque map portion which receives a predetermined torque request and which uses said predetermined torque request to produce a predetermined electrical current value; a model portion which receives said predetermined torque request and which uses said predetermined torque request to produce a predetermined voltage value; a current regulator which receives an electrical current signal having a value which is substantially similar to said predetermined electrical current value and which, in response to said receipt of said ~~predetermined~~ electrical current signal, produces a second voltage signal having a predetermined second voltage value; and a diagnostic portion which is coupled to said current regulator and to said model portion and which

Appl. No. 10/063,868

compares said predetermined voltage value with said predetermined second voltage value, and which determines the existence of a certain condition based upon said comparison.

Claim 10 (currently amended): The electric drive assembly of Claim 9 wherein said certain condition is determined to exist only if the difference between said ~~certain~~ predetermined voltage value and said ~~certain~~ predetermined second voltage value exceeds a certain condition threshold value.

Claim 11 (currently amended): The electric drive assembly of Claim 10 wherein said certain condition threshold value is about 10% of said ~~certain~~ predetermined voltage value.

Claim 12 (currently amended): The electric drive assembly of Claim 11 wherein said diagnostic portion provides a positive indication signal indicative of an undesired condition to a positive feedback assembly.

Claim 13 (currently amended): The electric drive assembly of Claim 12 wherein said positive ~~indication~~ feedback assembly comprises ~~the energization of~~ a light assembly.

Claim 14 (currently amended): The electric drive assembly of Claim 12 wherein said positive ~~indication~~ feedback assembly comprises ~~the energization of~~ an audio assembly ~~a sound device~~.

Claim 15 (original): The electric drive assembly of Claim 12 further comprises a selectively activatable machine and wherein said diagnostic portion deactivates said machine upon the detection of said certain condition.

Appl. No. 10/063,868

Claim 16 (currently amended): A method for ~~determining the existence of a certain operational state of~~ controlling torque within an electric drive assembly of the type which receives a certain torque request and which uses said received certain torque request to produce a voltage command, said method comprising the steps of ~~associating said torque request with a second voltage command~~, comparing said a produced voltage command with said a second voltage command; ascertaining the existence of a certain operational state of said electric drive assembly based upon said comparison; and automatically deactivating the electric drive assembly upon the ascertained existence of the certain operational state generating a signal indicative of undesired torque when the existence of said certain operational is ascertained.

Claim 17 (currently amended): The method of Claim 16 further comprising the step of activating providing a positive indication feedback assembly to notify an operator of said electric drive assembly of undesirable torque generation upon ascertaining the existence of said certain operational state when said signal indicative of undesired torque is generated.

Claim 18 (currently amended): The method of Claim 17 wherein said step of activating providing a positive indication feedback assembly to notify an operator of said electric drive assembly of undesirable torque generation when said signal indicative of undesired torque is generated comprises the step of energizing a light assembly.

Claim 19 (currently amended) The method of claim 17 wherein said step of activating providing a positive indication feedback assembly to notify an operator of undesirable torque generation when said signal indicative of undesired torque is

Appl. No. 10/063,868

generated comprises the step of activating energizing an audio assembly ~~a sound device~~.

Claim 20 (new): A method for controlling torque within an electric drive assembly comprising the step of:

generating a signal indicative of undesired torque generation when an undesired amount of torque is being produced by said electric drive assembly.

Claim 21 (new): The method of claim 20 further comprising the steps of:

providing an electric drive assembly having a torque generator, an inverter assembly which is coupled to said torque generator, a current regulator which is coupled to said inverter assembly, and a controller which is coupled to said current regulator;

receiving a torque request signal;

using said controller to select a certain value associated with said torque request signal;

producing a voltage signal having a certain amplitude attribute and a certain phase angle attribute in response to said received torque request signal, and

comparing at least one of said attributes of said voltage signal with a selected certain value.

Claim 22 (new) The method of claim 21 using the controller to generate said signal indicative of undesired torque generation.

Claim 23 (new): The method of Claim 22 further comprising the step of:

Appl. No. 10/063,868

selectively activating a positive feedback assembly when said signal indicative of undesired torque generation is generated by said controller.

Claim 24 (new): The method of Claim 23 further comprising the step of:

generating said signal indicative of undesired torque generation only when the difference between said at least one attribute of said voltage signal and said selected certain value is greater than a predetermined value.

Claim 25 (new) A method for controlling an electric drive assembly comprising the steps of

providing an electric drive assembly having a torque map portion, a model portion, a current regulator, and a diagnostic portion;

receiving a predetermined torque request in said torque map portion;

using said predetermined torque request to produce a predetermined electrical current value;

receiving said torque request in said model portion;

using said predetermined torque request to produce a predetermined voltage value;

providing a current regulator which receives an electrical current signal having a value which is substantially similar to said predetermined electrical current value;

producing a second voltage signal having a predetermined second voltage value;

comparing said predetermined voltage value with said predetermined second voltage value and

Appl. No. 10/063,868

determining an existence of a certain condition based upon said comparison.